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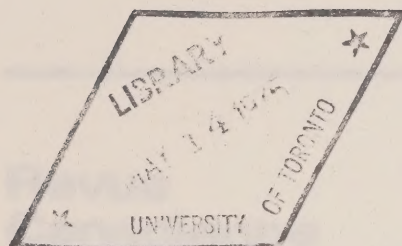
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by

J.F. Scott

REPRINTED PUBLICATION No. 14

Reprinted from:

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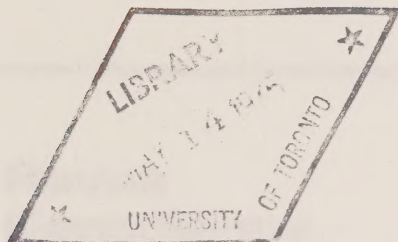
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PROBLEMS, POLICIES AND DATA NEEDS IN CANADIAN AGRICULTURE*

Juan F. Scott

This study maintains that the development of Canadian agriculture requires a reassessment of the values, constraints and goals relating to the sector, with a view to conceive and implement a goals-means-targets structure more amenable to progress. The solution of the economic, socio-psychological and organizational problems which beset Canadian agriculture is presently hindered by a paucity of adequate, timely data in crucial areas. The performance of the policy-maker and the agricultural producer have been generally suboptimal, as exemplified by extemporization in the case of the former and secular inefficiencies and forgone opportunities in the case of the latter.

Cette étude maintient que le développement de l'agriculture canadienne impose un réajustement des valeurs, des contraintes et des objectifs agricoles, afin de concevoir et d'aménager des structures évolutives englobant les fins et les moyens. Le manque de données valables et opportuns dans les domaines cruciaux nous empêche d'apporter une solution aux problèmes économiques, socio-psychologiques et structurels auxquels l'agriculture canadienne se heurte aujourd'hui. Ni les responsables, de la politique agricole ni les producteurs n'ont atteint un optimum d'efficacité, c'est ce que démontre l'improvisation qui règne dans la politique agricole et l'inefficacité séculaire et les occasions manquées dans le cas des producteurs.

INTRODUCTION

This paper attempts to shed some light on the complexities of Canadian agricultural development, by analyzing and placing in their proper perspective some of the crucial problems affecting this sector, the corresponding policies in effect or planned as solutions, and significant areas of neglect, particularly in regard to data availability.

VALUES, CONSTRAINTS AND GOALS

A discussion of the problems and policies of the agricultural sector in Canada presupposes a consideration of the values, goals and constraints which affect them, in order to provide some insight into the framework within which the sector functions.

Values

One of the most important values affecting the development of the Canadian agricultural sector today is that of the "goodness" of the family farm. While the author could find no explicit government policy which prescribes the preservation of the family farm as the most desirable (or viable) form of farm organization, there is an implicit adherence to this value, which on occasion engenders economically inefficient and socially unsound situations. A sobering reappraisal of the socio-economic capabilities of the family farm is preferable to a blind adherence (implicitly or explicitly) to a value which may have already been rendered anachronistic. As the Task Force Report indicates [6, p. 335] the family farm may not be able to cope with the increasing complexities associated with operating a farm business which are in the making for the foreseeable future.

* The author's grateful for the helpful comments on an earlier draft given by Dr. H. V. Walker and Dr. M. L. Lerohi. Miss G. Quinn's assistance in collecting and analyzing the data was invaluable. The opinions expressed, the accuracy of the material presented, and the conclusions reached are the author's responsibility.



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Another relevant agricultural value, which is also in the process of being mythologized by developments in the sector, is that of absolute independence of decision-making at the farm level, which, in turn, presupposes entrepreneurial prowess. The reliance on this assumed wisdom of each individual producer in an industry characterized by uncertainties, fierce competition, atomism and rapid technological advancements, often leads to inefficiencies. Witness, for instance, the secular instability of commodity prices, which, in turn, has led to establishing boards and other such regulatory bodies. This constitutes one of the major paradoxes presently existing in Canadian agriculture: The preservation of the independence of the producer as a basic value brings about the organization and operation of marketing boards, whose *raison d'être* is precisely that of control and thus limitation of the farmer's independence.

A value which on occasion becomes an obstacle to the attainment of goals in agriculture as well as in the economy at large, is that of virtually unrestrained capitalism. In a democratic-capitalistic country such as Canada, where economic interactions take place at a very high degree of *laissez faire*, governmental interference in the activities of individuals (and corporations) as a rule is kept at a minimum. This means that whenever the need arises for effecting state regulation, this interference will be tempered and oftentimes rendered ineffective by the policy-makers' abhorrence of tampering with the individual's "rights." On the other hand, even with the absence of explicit declarations or policies to that effect a trend seems to be on the way towards greater governmental awareness and regulatory interference for achieving a better allocation of resources. Recent examples of this are the implementation of Operation Lift in the Prairie Provinces,¹ the consideration being devoted to alternative means of supply management, and the adoption of provincial restrictions to the free movement of inputs and products.

Constraints

The development of agriculture presupposes operating within three kinds of constraints (aside from climatic limitations, which will be regarded here as a constant datum), which dictate the pace and/or scope of action-taking. The first kind comprises those characteristic of the agricultural sector itself, such as the limited technical substitutability of resources. This means, for instance, that a wheat farmer could not easily make a complete change to the production of beef cattle in response to changes in market conditions. The grain surplus problems which have secularly plagued Canadian agriculture, are an indication that the farmers have not been too successful in bridging the gap between change and adjustment, largely because of a lack of flexibility in the use and allocation of resources. There is room for further stretching the confines of the technical limitations which characterize the sector.

The second kind of constraints consists of those proper to the over-all Canadian economy, but which bear significant effects in agriculture, such as the inter-sectoral competition for resources, inclusive of governmental policy prerogatives. This means that the extent to which both individuals

¹ This is a temporary scheme designed to cut down wheat acreage and enhance forage production.

and governments would channel resources to agriculture is tempered by the demands of the other competing sectors [6, p. 413]. Ideally, a sector's share of the available resources would be a direct function of the efficiency with which it contributes to the development of the economy as a whole. This has not been the case in the Canadian context, judging by one current of opinion which contends that the agricultural sector has been short-changed relative to its contribution to the development of the overall economy [5, p. 74]. Be this as it may, thousands of poor farmers² and a secularly persistent gap between agricultural and non-agricultural salaries [5, p. 73] attest to the present inability of the sector to effectively compete with the others in the economy.

The third kind of constraints are a function of the open-ended status of the Canadian economy. Since Canada relies heavily on its international trade, the decisions made by the Canadian agricultural producers and the various levels of governmental policy-makers must appraise and scrutinize the mood, tempo, and perspectives of the developments taking place in the entire world. Unfortunately, there are indications that the full implications of visualizing Canadian agricultural development within the context of the larger international situation have not been grasped either by the policy-makers, much less by the individual producers themselves.³

Goals

The explicit, generally accepted goals for the Canadian agricultural sector constitute, in effect, an adaptation of the goals for the economy at large as stated by the Economic Council. Briefly, they are: (1) full employment, (2) price stability, (3) a viable balance of international payments, and (4) equitable distribution of income. A close look at these goals reveals, aside from their overwhelming ambiguity, that they are really means towards attaining an end which can be summarized as "improving the level of living of the agricultural population, while simultaneously maintaining an effective contribution of the sector to the economy." Conceived in this manner, the final goals for the agricultural sector become more inclusive, inasmuch as they then comprise amelioration of the quality of life additionally to material improvement.

Since the goals of an economy (or a sector within it) constitute the guiding principles of its development, they must fulfill some important preconditions, lest they become obstacles to development. Outstanding among these prerequisites are found: (1) they must be clearly defined, for confusion and ambiguity engender wastages and preclude evaluation of accomplishments; (2) they must be sufficiently inclusive to stave off inefficiencies inherent in the neglect of significant variables; (3) they must be realistic, in order to retain their value as guiding forces; and (4) they must be easily translated into action.

There are strong indications that the goals structure of the Canadian agricultural sector is lacking in regard to each of the above characteristics. For example, the paucity of definition in goals has on occasions detracted

² The Task Force Report [6, p. 421] gives a 1966 figure of 170,000 farms with a combined farm-off-farm income of less than \$3,000 annually.

³ In a recent (October, 1970) Conference on Agricultural Growth held in Winnipeg, the prevailing mood expressed by a number of those attending was indifference towards international market considerations.

from implementing programs [6, p. 443-444] or created confusion between means and ends. Furthermore, some of the most important problems which preclude the development of the sector today are a direct consequence of the secular neglect of certain relevant subsectors or relationships.⁴ The conception and implementation of a complete goals-means-targets structure is needed. Accomplishing this implies the organization and operation of a planning and coordinating mechanism at a scale never before experienced in the Canadian agricultural sector [3, p. 69].

OUTSTANDING PROBLEMS AND POLICIES

Ascertaining Problem Areas

Once the values, constraints, and goals are properly defined, the next step in providing for the development of agriculture involves the identification of the problems and the formulation of policies—embodied in corresponding programs—to solve them. The same sort of ambiguity, and at times confusion, which permeates the goals structure of Canadian agriculture can be found respecting the delineation and resolution of problems. For instance, the Task Force Report provides a long list of what it regards as “symptomatic problems of agriculture” which, in fact, comprises a concatenation of problems, some of their causes and consequences [6, p. 7].

An alternative conceptualization of the outstanding problems affecting Canadian agriculture—which takes into account the Task Force’s list of “problems”—can be summarized as follows: (1) Economic problems comprising (a) production inefficiencies and (b) marketing adjustments and inefficiencies; (2) socio-psychological problems including (a) welfare provisions for non-viable farmers and (b) adjustment requirements of rural families; and (3) organizational problems comprising (a) inadequacies in the institutional structure and in the implementation of governmental policy-making (both within and without the sector); and (b) ineffectual organization of farmers.

Alternative General Approaches to Conceptualizing Canadian Agricultural Problems

There seem to be three general approaches to conceiving and seeking solutions to the problems of Canadian agriculture. The first one visualizes the problems as the result of the adjustment process which the sector is undergoing, and as such, relies heavily on limiting the use or removing resources from agriculture, with some consideration given to improving the use of those resources left in the sector [6, p. 432]. This approach presupposes that the individual producer is unable to change rapidly and effectively enough to redound in his own benefit and that the economy at large, hence he must be helped considerably by government.

The second approach advocates maintaining the present level of resource use in agriculture while seeking ways of utilizing resources more fully. The supporters of this view are concerned with maintaining the “importance” of agriculture, as a sort of hedge against unforeseen changes in worldwide demand-supply relationships. Those who hold this fundamentalist position regard the producer as quite efficient within the present state

⁴ For instance, the neglect of the role of women in Canadian agriculture is mentioned in [2, p. 38].

of technology and hence successful in adjusting to changes. Therefore, to them it is present governmental policies that require drastic adjustment to make them more attuned with the farmer's advances. The implementation of their ideas, in the case of wheat, for instance, would entail a secularly persistent and worsening wheat surplus problem with its resulting wastages.

The third alternative approach combines elements of the previous two, while incorporating some variables neglected by both. This view regards agricultural adjustment as a logical consequence of development but which requires the adoption of drastic changes in the level and manner of resource allocation and use, simultaneously with the fulfilment of certain preconditions. This means undertaking a systematic, integrated approach when instituting changes, which entails the delineation of production, productivity, and marketing targets, while maintaining a certain flexibility. It is important that a great deal of flexibility (the key word in this approach) is retained in the decision-making mechanisms of farmers and governments alike, which would allow a rapid readjustment in the pattern of resource use in response to significant changes in the level and nature of demand. This involves the *a priori* quantitative estimation of the slack—in terms of unrealized productive capacity and redundant resources—which can be optimally sustained, an undertaking which has not yet been effected respecting Canadian agricultural production, although measures are implemented (i.e., reduction of wheat acreage) which presuppose the calculation of this slack.

As can be seen, a common element in all three conceptualization approaches discussed above is that the onus of action is placed on government. Under present circumstances the governmental policy-maker must initiate, help implement, and fiscalize the actions to be taken toward the solution of Canadian agricultural problems.

Policy-Making and Problem-Solving

A summary analysis of the attempts at solving some important problems of the Canadian agricultural sector will aid in evaluating the performance to date as well as ascertaining the future prospects.

Economic problems: The first and major obstacle encountered in analyzing Canadian agricultural problems is the paucity of important data. For example, very little information is available regarding: (a) the ranges in costs of production and their optimal levels under varying factor and product configurations; (b) the efficient level of production and its desirable marginal increase consistent with the needs and goals of the economy; and (c) the alternative potential limits to the expansion of domestic and international demand. These (and other) critical information vacuums are counted among the main determinants of the rambling nature of policy-making in agriculture. This is particularly the case in the implementation of programs—such as credit-granting, subsidies and supply control and disposition—which require *a priori* determination of optimal levels, acceptable ranges and other precise quantitative benchmarks. As delineated before, the economic kinds of problems affecting the Canadian agricultural sector are basically those concerning the efficiency of production and of marketing. These will be taken up in turn.

While some studies have been made which attest to the rapid progress in absolute, overall productive efficiency obtained by Canadian farmers [4, 7], a fact which is not refuted herein, little or no consideration has been given either to relating these productivity achievements to the attainable potentials, to the opportunity costs of alternative input mixes and/or production configurations, or to the net welfare gains of the producers.

A closer look at some of the components of the growth in efficiency of the Canadian farmer and a comparison of his performance with that attainable at the present state of technological development brings forth a more realistic, less commendable picture.⁵ An examination of yield data for selected major crops, for instance, sheds some light as to whether the Canadian farmer is operating at his optimum level of efficiency, within the "state of the arts" at his disposal. As shown in Table 1, this does not seem to be the case in regard to the efficient use of the factor land in the production of crops.⁶ Only in the cases of corn and soybeans (and mixed grains to a lesser extent), was the performance of the Canadian farmer enviable, as compared to his potentials in the world economy.

Since a closer approximation of Canadian yields to the best in the world would essentially amount to undertaking a more intensive utilization of the factors of production, the implication is that such resources are currently underemployed in Canada, relative to the potentials (*ceteris paribus*). The extent of this underemployment remains to be ascertained since data which measure the precise potentials of the Canadian farmer under the constraints in which he operates are sorely lacking. It has not

TABLE 1
Average Yields of Selected Crops for Canada and the World's Best, 1966-68*

Product	Canada's Yields (Bushels/Acre)	World's Best Yields (Bushels/Acre)	Canada World's Best (%)	Canada's Rank
All wheat	23.2	68.0	34.1	38/92
Maize (all corn)	78.5	86.4	90.9	3/126
Barley	28.7	59.2	48.5	28/73
Oats for grain	25.7	59.7	43.0	21/49
Flaxseed	10.4	26.0	40.0	14/38
Rapeseed	14.0	42.1	33.2	24/32
Mixed grains	31.8	52.6	60.4	14/22
All Rye	18.9	65.7	28.8	24/39
Soybeans	30.0	31.1	96.5	1/33
Potatoes	276.1	517.4	53.4	22/108

* The average of three consecutive years was used eliminate the effects of unusual yearly fluctuations

Source: *FAO Production Yearbook*, 1969, Vol. 23.

⁵ MacEachern [10, p. 20] contends that "Research Station Directors estimate a potential for at least double farm productivity in their areas from applying known technology. . . ."

⁶ Yield data constitute only a partial, rough measure of over-all production efficiency. More precise comparisons of this kind require allowing for inter-country cost differentials. However, within a country, the farmers have the potentials for altering the price-cost structure.

been determined yet, for instance, to what extent the use of agricultural resources can be intensified, consistent with the expected growth of domestic and international demand of the products (also an unknown), plus a "reasonable" (undefined to date) carryover to hedge against unforeseeable catastrophes.

An examination of the changes in output per man-hour, as shown in Table 2, reveals that the labor productivity of the Canadian farmer has been increasing at a faster rate than that of workers in manufacturing and other industries. In the 20-year period studied, agricultural productivity grew at 1.2 percentage points faster than manufacturing and 2.3 percentage points faster than other industries. The corresponding rate of growth for the economy as a whole (3.4 percent) was 1.9 percentage points lower than that exhibited by agriculture. Furthermore, a look at the inter-industrial levels of this variable shows that the agricultural industry has consistently led the way in the last two decades, hence its important contribution to the overall progress of the economy. The extent to which the producers themselves have benefited from these strides in labor productivity are yet to be ascertained.⁷ However, there are indications that these benefits have not been universal. Witness, for instance, the persistence of rural poverty and a lag in incomes.

One aspect of the use of resources in agriculture which has not been adequately studied concerns the growing capitalization of production. While some work has been carried out which reveals that the development of Canadian agriculture has been characterized by increasing substitution of labor for capital with land remaining proportionally constant [7, p. 45], little or nothing has been done in evaluating the economic efficiency of these major changes in input mix. Hence there is a paucity of knowledge

TABLE 2
Canada Changes in the Indexes of Output/Man Hour, 1949-69
(1961 = 100)

Period	Canada		
	Agriculture	Manufacturing	Other ¹
1949-52	73.4	66.1	70.6
1953-56	87.8	75.2	83.5
1957-60	103.1	89.3	92.6
1961	100.0	100.0	100.0
1962-65	141.2	111.3	106.9
1966-69	170.5	129.3	118.8
Annual Rate of Growth			
1949-69	5.3	4.1	3.0

¹ Non-Manufacturing (Commercial Non-Ag. Industries).

Sources: *DBS Daily*, Friday, Feb. 12, 1971, 9 and 10, and Unpublished Data.

⁷ Lok [8] found a positive relationship between over-all productivity and net return per farm. However, data on the proportion of productivity gains which reach the farmer have not been produced.

as to what the optimal limits are to this capitalization and whether these limits have been overshot. It is conceivable, for instance, that in certain farm operations, excessive capitalization is a factor contributing to high cost of production. Some hint that there might be over-capitalization in Canadian agriculture can be inferred from Furniss' work [7, p. 44], which generally shows that between 1935 and 1960, while the output per labor and real estate ratios increased substantially (growing at annual rates of 4.63 percent and 1.56 percent, respectively), the corresponding ratio for capital decreased significantly (1.93 percent per year).

One important component of the observed trends in farm capitalization has been farm machinery, which underlines the significant shift in the sources of power from labor and farm-grown animals to mechanical devices characteristic of the technological changes in the last quarter-century. According to the 1966 Census figures, the number of farm tractors nearly tripled since 1951. This, coupled with a declining number of farms, has resulted in a rapid increase of tractors per farm (at 2.3 percent per year). In 1969 there were 176 tractors per 100 farms in Canada, which raises the question as to whether in every case it was efficient to purchase (and maintain) these machines. There is a serious lack of data of the kind which would allow a precise determination of the optimal level of machinery use under different conditions.

Another indication that the Canadian farmer is not adequately reaping the benefits of his technological progress is found in the much referred to "cost-price squeeze" phenomenon. Briefly, it consists of a depressing effect on product prices and incomes brought about by rapid productivity advances, while at the same time prices of inputs rise at a faster rate than those of products. Some evidence of the existence of this "squeeze" is given by the data in Table 3. Note that in the two decades

TABLE 3
Canada, Changes in the Indexes of Prices Paid¹ and
Prices Received² by Farmers, 1949-69
(1961 = 100)

Period	Prices Paid	Prices Received	Prices Paid Prices Rec'd. (%)
1949-51	75.5	105.0	71.9
1952-55	84.4	96.3	87.6
1956-59	91.2	93.1	98.0
1960-62	100.0	100.1	99.9
1963-66	112.3	107.3	104.7
1967-69	136.7	115.3	118.6
Annual Rate of Change (1949-69)	3.01	.47	2.53

¹ Composite Price Index Numbers of Commodities and Services Used by Farmers, Exclusive of Living Component. The base of the original series was changed from (1935-39) = 100 by using the average for (1960-62) = 100

² Index Numbers of Farm Prices of Agricultural Products sold at the farm level, exclusive of Newfoundland.

Sources: Dominion Bureau of Statistics, Publications No. 62-004 and 62-003, various numbers.

examined (1949-69), prices paid by farmers for their inputs rose at an annual rate which was 2.54 percentage points faster than those they received for their products. Hence the ratio of prices paid/received, increased continuously, which means that the terms of trade of the agricultural producer deteriorated during this period in spite of his advances in labor productivity.

Since the long-run prospects indicate the advent of additional productivity advances which would rebound in a dampening effect on output prices and continuing pressures from consumers for low product prices (given general inflationary trends and low income elasticity of demand for foods), the greatest latitude for escaping the "cost-price squeeze" rut lies in the reduction of the costs of production.⁸

Undoubtedly, there is also room for improving the performance of the farmer in the product market. Secularly, his ability in this respect has been suboptimal, as judged, for example, by chronic product-disposal problems and an increasing reliance on governmental intervention (e.g., marketing boards) for modifying marketing forces. One aspect of the distribution of agricultural products which has been neglected by producers and government alike concerns the determination of optimal product mixes and their level of production attainable under prevailing conditions. While there is a lack of data in this area, there are indications that the enterprises with secularly have received the most emphasis (i.e., cereal grains) are not maximizing the long-run opportunity costs of the resources employed in their production [9, p. 15]. Witness, as an illustration, that while the long-term prospects for increased Canadian wheat exports are filled with vicissitudes, oilseed crops and beef cattle enjoy excellent prospects in the world market [6, p. 99 and 163], though the latter have received relatively little attention.

From the data in Table 4 it can be inferred that the potentials for expanding production of major export commodities have not been properly exploited, particularly in regards to products with long-run, worldwide favorable marketing prospects such as proteides. Note that the annual growth rate of Canadian wheat exports for 1960-68 was .98 percentage points higher than that of the world. Since by 1966-68 Canada held more than one fifth of the total world export market of wheat, it is doubtful that there is much more room for future expansion, barring unforeseen, drastic changes in the international supply-demand conditions. On the other hand, for products such as cattle, pork and soybeans, for which the Canadian contribution to world exports is less than 10 percent, there seems to be more room for expansion. For example, while in the period of concern world exports of cattle increased at an annual rate of 5.54 percent, those of Canada decreased by 1.89 percent. Likewise, Canadian pork and soybeans exports grew only at a fraction of the observed world rates. In the case of barley, although Canada accounted for more than 10 percent of the world's export supply, expansion has been proceeding at a relatively slow pace (2.58 percentage points less than the world).

When examining the long-run prospects for production and marketing of Canadian agricultural goods, two important policy issues come to the

⁸ This concurs with Drummond is [5, p. 75] second solution to the conflict between increasing agricultural productivity and rising agricultural income, which calls for increased emphasis in efficient resource use.

TABLE 4
Changes in Exports of Selected Agricultural Commodities for
Canada Compared to the World Market, 1960-68

Commodity	1960-63		1966-68		Annual Rates of Change, 1960-68 Percent		
	Value of Exports		(million dollars)		% of World Market	Percent	
	World	Canada	World	Canada		World	Canada
	millions of US \$						
Wheat and Wheat							
Flour	2,789.35	604.35	3,628.60	831.52	22.92	+ 4.48	+ 5.46
Tobacco (Unmanuf.)	992.70	28.55	1,237.38	43.06	3.48	+ 3.73	+ 7.09
Bovine Cattle ¹	458.88	53.43	634.32	47.64	7.51	+ 5.54	- 1.89
Barley (Unmilled)	337.00	43.01	443.66	48.73	10.98	+ 4.68	+ 2.10
Pork ²	1,345.39	145.33	2,958.50	199.38	6.74	+14.03	+ 5.41
Meat from Bovines ³	6,156.41	83.80	12,355.14	199.38	1.61	+12.31	+15.54
Milk and Cream (Dry)	4,502.38	94.87	3,997.41	138.64	3.47	- 1.96	+ 6.52
Soybean Cake and							
Meal	1,041.53	137.23	3,232.66	182.90	5.66	+20.01	+ 4.90

¹ Including Buffaloes.

² Meat of Swine, Fresh, Chilled or Frozen.

³ Meat from Bovine Animals Fresh Chilled or Frozen.

Source: AFO — *Trade Yearbook*, various numbers.

surface, neither of which has thus far received appropriate consideration or a satisfactory answer: One refers to the orientation that should be given to this expansion (domestic or international), and the other concerns the determination of the specific market outlets and the concomitant programs to ensure the placement of the expected incremental production. As to the first issue, the existence of low aggregate income elasticity of demand for agricultural products implies that further expansion of their domestic demand will be determined mainly by population increases. Since the Canadian population has been growing in the last ten years (1960-70) only at an annual rate of 1.81 percent, which is .87 percentage points less than for 1950-60, the implications are that the prospects for further significant expansion of the domestic market for farm products are limited. Hence it appears that future increased marketing of these goods should be internationally oriented.

The question about which international markets should be cultivated by Canadian policy-makers and producers alike has been largely unexplored or very narrowly conceived.⁹ The tendency has been to over-emphasize the traditional outlets for Canadian agricultural products—the

⁹ The Task Force, for instance, constantly confines international market considerations to trade with the United States [6, p. 433] and pays very little attention to the Less Developed Countries, except in relation to "Food Aid" programs [6, p. 55].

United Kingdom, the United States, the European Economic Community and more recently Japan—to the virtual neglect of the opportunities that lie in the Third World Countries. The generally low rates of population growth, high income levels, and low income elasticities for foods of the advanced countries, coupled with the disposal problems which many of them face for the main Canadian export products, renders them doubtful candidates as outlets for expanded commercial production.

The “Centrally Planned” economies—Mainland China, Eastern Europe, Cuba—while having generally higher rates of population growth, are as a rule at a lower state of development than the countries mentioned above, which implies that they have still some unused capacity for the production of those agricultural goods which Canada exports. Thus they can be expected to attempt to concentrate in supplying rather than importing these products in the long run. Hence the greatest opportunities and most profitable long-run future outlets for Canadian agricultural exports appear to lie in the Less Developed Countries—Latin America, most of Africa, and Asia, excepting Japan—where to the present, Canadian market penetration has been very limited. These countries still exhibit high population growth rates (around 3 percent per year), low incomes, and a high unfulfilled propensity to increasingly consume those products which Canada exports. Since the progression to development for the Less Developed Countries is a slow and arduous process, in the foreseeable future they constitute favorable markets for expanded Canadian agricultural exports. Whether and to what extent this opportunity can be capitalized would largely depend on the expansion of the data base available in Canada on the present and prospective international market situation and on the nature and scope of trade promotional activities undertaken by the government as well as the producers.

Socio-psychological problems: The main socio-psychological problems affecting the Canadian agricultural sector are linked to the economic problems examined in the previous section. Indeed, the rapid technological changes taking place in agriculture and the ensuing adjustments—or lack of adjustment—made by farmers and governments can be regarded as the main sources of socio-psychological problems. A listing of these problems would include such things as: family dislocations, uncertainties in decision-making, lack of motivation for improvement; anxieties about effecting changes; reticence or inability to receive retraining; and unfulfilled health, educational and recreational needs.

Secularly very little has been done towards ascertaining, analyzing, and solving the psycho-sociological problems of farmers and their families. Most of the governmental efforts in this respect have been at best partial, ad-hoc measures taken for the purpose of aiding the adjustment process of the farmers who decide to move to other sectors [2, p. 70]. This assistance has taken the form, for instance, of retraining and limited follow-up of heads of families and granting them relocation funds. However, an integrated, all-inclusive understanding of the socio-psychological make-up of the farmer and his family is still lacking.

While a great deal has been said about the “what” and the “how” of agricultural production and marketing, there remains a wide grey area of ignorance regarding the “why,” which injects errancy into the policy-making mechanism. Much knowledge is needed, for instance, concerning the motiva-

tional make-up of the farmer and the effects of family considerations in his decisions regarding things such as adoption of innovations, choosing between alternative resource mixes or enterprises, moving out of agriculture, acquiring new skills, etc. The prospects for the resolution of the psycho-sociological problems of rural dwellers in general appear brighter than their present status, if governmental "concern" is taken as in indication.

Thus the Task Force's "Recommendations to Combat Rural Poverty" include measures geared towards: (a) improving the adjustment assistance given to farmers; (b) institutionalizing welfare assistance to the chronically poor, non-viable farmers and (c) ameliorating social services and living conditions [6, p. 423-427]. Whether and to what extent these recommendations will be implemented remains to be seen, as some of them are quite controversial. In any event, a considerable improvement in the means for effecting these changes is in the making, as the intended Linkage of the 1971 Population and Agriculture Censuses will generate a considerable amount of cross-classified socio-economic data, which should aid tremendously in understanding the behavior of the farmer and his family. However, even after these new data are produced, there will remain a critical vacuum regarding the psychological make-up of rural dwellers.

Organizational problems: Two types of problems can be identified under this subheading: (a) inadequacies in the nature or functioning of governmental institutions and policies and (b) ineffectual farmers' organization [6, p. 6]. Concerning the organizational performance of government in agriculture, the most striking deficiency lies in the existence of a sub-optimal integral planning mechanism. The very meager organization or concern for conducting planning in agriculture which exists to date is still in the incipient state, as represented by the recently formed Policy and Planning Secretariat in the Department of Agriculture—ostensibly in response to one of the Task Force's recommendations—and the intended long-run policy-making approaches of Regional Economic Expansion. The obvious results of this lack of appropriate planning are (i) poor program coordination, with corresponding wastages; (ii) partialism or incomplete coverage (or outright neglect) of certain important issues;¹⁰ and (iii) confusion as to the goals to be attained, the most efficient means to these ends and their optimal priority ordering.¹¹ While recognizing the structural constraints under which a federally organized, complex country such as Canada must operate, there is still no justification for the frequent trial-and-error way in which royal commissions, tasks forces, consultants and government departments have been making the implementing agricultural policy, oftentimes without a well-grounded, timely information base.

If the organizational performance of government in agriculture to date leaves much to be desired, that of his farmer, in comparison, has been even worse. Of all the subsectors comprising the overall agricultural industry, the producers constitute the most disorganized, least understood, and most dissatisfied group. While no attempt will be made here to de-

¹⁰ Partialism is a common occurrence when a myriad of government departments at different levels simultaneously make and implement agricultural policy in an atomistic, haphazard manner as illustrated by Poetske [11, p. 41].

¹¹ These three results coincide with Poetske's consequences of the present ineffectual organizational structure in agriculture [11, p. 42-43].

preciate the contributions to the farmers' (and the sectors') welfare made by farm organizations to date, the fact remains that the degree of effective organization to date is negligible, as no one farm group can speak forcefully for all the producers nor use its power to procure benefits for them [6, p. 296].

The roots of this atomistic state and relative lack of effectual power of the agricultural producers in Canada are firmly grounded in the value structure, for the entrepreneurial "independence" of farmers constitutes a major obstacle to their attainment of bargaining power. A blind adherence to this value has to date rendered them vulnerable, on the one hand, to well-organized (overtly or covertly) factor sellers and product buyers who advantageously capitalize on the producer's technological achievements. On the other hand, the fierce competition and rapid technological advancements which characterize the sector, cull out the weaker producers and temper the gains of those who succeed.

Recent developments in the sector indicate that the idyllic conception of the entrepreneurial "independence" of the farmer may be giving way to the realities of modern economic relationships. Note, for instance, that from 1951 to 1966 the number of farms operated by the owner decreased by 192,569, (25.13 percent), while those partly owned by the operator or partly rented increased by 8,371, (9.38 percent) [1, Table 4]. The prospects for the future are favorable to the extension of this trend, as the operator continues to seek income supplements in the off-farm sector and as the increasing complexity of farm operation will combine to exact additional managerial skills from the operator, as an important prerequisite for success. As these stresses on the owner-operator type of farm organization continue and intensify, the advantage of alternative arrangements will become more evident,¹² and one of the latter could eventually replace the first as the main kind of farm organization in Canada.

One possible solution to the present relative lack of effective power of the agricultural producers [12, p. 43-44] is their complete unionization along the lines of their counterparts in other industries. This proposition, while spurned by some, feared by others, and summarily dismissed or circumvented by yet other concerned parties [6, p.9, 303 and 445] remains to be proven invalid.

Although at present this solution may seem farfetched and even abhorrent, in the long run it may prove to be one of the very few alternative means of staving off the deterioration in the bargaining power of the agricultural producer. Rather than pitting the producers against other subsectors in the agricultural industry, this would essentially entail providing them with the countervailing power that would enable them to share more equitably the fruits of the progress attained in the sector. Simultaneously a more effective organization of producers would enhance their bargaining position with government, thus enabling agriculture to better compete with other sectors for the allocation of scarce governmental services and other resources.

Failing the effective organization of the farmers means, alternatively, that those fortunate enough to remain viable producers must pay the price

¹² Dawson [4, p. 20] also predicted a shift from the owner-operator to other forms of farm management control. Some of these management changes have already taken place.

of their atomistic "independence" in the form of a considerable build-up of flexibility in their operation. This is imperative if the farmer is to quickly alter his input and product mix and atune his management decisions and capabilities to the increasingly complex changes in production and marketing technology, as well as to the socio-political interrelationships brought about by the dynamics of progress.

Summary and Conclusions

The attainment of the goals for the development of Canadian agriculture is on occasion hindered by a rigid adherence to certain overriding values, such as the "goodness" of the family farm, the entrepreneurial prowess of the producer, and virtually unrestrained capitalism. There are indications that the Canadian agricultural sector is not effectively stretching the confines of the constraints within which it operates. The goals for the agricultural sector do not fulfill certain important prerequisites. There is a need for the conception and implementation of a complete goals-means-targets structure.

Three kinds of problems beset Canadian agriculture: (1) economic, (2) socio-psychological, and (3) organizational. In all of the three general approaches to conceptualizing and solving these problems, the initiative for undertaking actions rests with the policy-maker. While the efficiency of the Canadian farmer has generally improved, little has been done to compare his achievements with his potentials. It appears that these potentials are not fully realized, implying underemployment of resources. Although the agricultural industry has consistently led the way for the last 20 years in advances in labor productivity, there are indications that the benefits accrued to the farmer have not been universal, as illustrated by the cost-price squeeze phenomenon. The ability of the producer to operate in the market has been suboptimal. The future expansion of the market for Canadian agricultural products should be internationally oriented and should be geared toward the Less Developed Countries.

Historically little has been done toward ascertaining, analyzing, and solving socio-psychological problems. The prospects for the resolution of these problems appear brighter than the present and would be enhanced by the data generated by the 1971 Agriculture-Population Linkage Program. The most striking deficiency of the organizational performance of government in agriculture consists of a suboptimal integral planning mechanism. The obvious results of this are poor program coordination; partialism or neglect of important issues; and confusion as to goals, means, and priorities. Extemporization has frequently characterized policy-making and implementation in agriculture.

The organizational performances of the farmer has also been lacking, in spite of the contribution made by farm groups. The roots of the lack of effective power by farmers are grounded in the value structure. One possible solution to this situation is the complete unionization of agricultural producers along the lines of their counterparts in other industries. Another avenue involves building up sufficient flexibility in the farm business.

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